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## Phytochemical and Antioxidant Activity Testing of Red Ginger (*Zingiber afficanate* var. *amarum*) and White Ginger Ethanol Extract by UV-Vis Spectrophotometry

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### ABSTRACT

Ginger (*Zingiber afficanate*) is one of the spices that is widely known by the public, and is widely used as a beverage ingredient, food seasoning, medicinal concoction, and so on. Several studies say that ginger is a good source of antioxidants and increases antioxidant activity. This research aims to determine the phytochemical content, to determine antioxidant activity based on the  $IC_{50}$  value of the ethanol extract of red ginger rhizomes and great white using the DPPH method using UV-VIS Spectrophotometry, and to get an idea of the differences in antioxidant activity of the ethanol extract of red ginger rhizomes and great white. The method in this research consists of extracting samples of red ginger (JM) and large white ginger (JP) by maceration using a 95% ethanol filter, then carrying out phytochemical tests including alkaloid test, tannin test, polyphenol test, and flavonoid test, then continued with testing. The antioxidant activity of the DPPH method was measured using a UV-Vis Spectrophotometer. The results of phytochemical screening, it was found that JM and JP contain alkaloids, tannins, polyphenols and flavonoids. The results of testing the antioxidant activity of the DPPH method, which was measured at a maximum wavelength of 517 nm, obtained an  $IC_{50}$  JM value of -56.606  $\mu\text{g/ml}$ ,  $IC_{50}$  JP -163.34  $\mu\text{g/ml}$ , which shows that both samples have no antioxidant activity.

**Keywords:** Ginger, Antioxidants, DPPH, *Zingiber afficanate* Rosc,  $IC_{50}$